

Notice of Allowability

Application No.

10/038,311

Examiner

Ayal I. Sharon

Applicant(s)

RICH ET AL.

Art Unit

2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11/4/06.
2. ☒ The allowed claim(s) is/are 1-7,9-31,33 and 34.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Introduction

1. Claims 1-7, 9-31, and 33-34 are currently pending in U.S. Application 10/038,311. The application was originally filed on 01/02/2002.

Examiner's Statement of Reasons for Allowance

2. Claims 1-7, 9-31, and 33-34 are allowed.
3. The following is an examiner's statement of reasons for allowance for claims 1-7, 9-31, and 33-34.
4. The prior art referred to in this Reasons for Allowance is as follows:
 - a. Balaji, E. et al. "Modeling ASIC Memories in VHDL." Proc. of EURO-DAC '96, Sept. 16-20, 1996. pp.502-508. ("**Balaji**").
 - b. IEEE Std. 1497-2001. "IEEE Standard for Standard Delay Format (SDF) for the Electronic Design Process." Approved Dec. 5, 2001. ("**IEEE Std. 1497-2001.**").
5. Independent claims 1, 11, 18, and 25 have all been amended to include the following elements:
 - a rise-time super generic value for a selected rise time delay value; and
 - a fall-time super generic value for a selected fall time delay value; and
 - ... the rise-time super generic value being independent from the fall-time super generic value."

As the Applicants persuasively argue in pp.16 of the amendment filed on 11/4/2005, Balaji does not expressly teach that the rise delay and fall delay specifications are independent.

On the other hand, IEEE Std. 1497-2001 (see Section 5.4.1 "Specifying Delay Values", p.24, 3rd para.) does teach that the rise delay and fall delay specifications are independent.

However, neither Balaji nor IEEE Std. 1497-2001 expressly teach the building of both "generic variables" and "super generic values" for selected rise and fall delay times.

6. Dependent claims 2-7, 12-17, 19-24, and 26-32 depend from allowable independent claims 1, 11, 18, and 25, and therefore also are allowable.
7. Independent claims 9 and 33 were previously indicated as having allowable subject matter. Applicants have rolled up these previously-dependent claims to include the limitations of the independent claims 8 and 32, respectively.
8. Newly amended Claim 9 recites the following:

9. A method for generating a reduced size SDF from grouped delay values, the method comprising:
extracting correlation delays from a VHDL standard delay file analysis file;
generating a three-dimensional VHDL associative array structure that includes:
 a z-axis of the data structure representing a set of common blocks for each logical topology of a VHDL logic gate;
 an x-axis of the data structure representing a delay name for the gate topology;
and
 a y-axis of the data structure representing an actual delay value; and
outputting a correlation VHDL file.

Balaji teaches (see p.507, right column, last paragraph) an SDF construct in the VITAL memory model for timing arc specifications. The "Example" in

Balaji's construct appears to have sets of three parameters [i.e. (1:2:3), (4:5:6) ... etc.].

However, Balaji does not expressly teach that these sets of three parameters correspond to the representations of the x, y, and z-axes claimed in applicants' claim 9.

IEEE Std. 1497-2001 (see Section 5.4.9 "Output Retain Delays", p.32) teaches the use of three co-ordinates of data in order to specify the delay data used for modeling output or bidirectional ports [i.e., (4:5:7)],

However, IEEE Std. 1497-2001 does not expressly teach that these sets of three parameters correspond to the representations of the x, y, and z-axes claimed in applicants' claim 9.

9. Claim 33 is a computer readable medium claim that recites limitations equivalent to the limitations recited in method claim 9.
10. Dependent claims 10 and 34 depend from allowable claims 9 and 33, and therefore also are allowable.
11. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Amendment

Re: Specification

12. Applicants have amended the specification to add the missing patent application numbers. Examiner has therefore withdrawn the objection to the specification.

Re: Claim Objections

13. Applicants have amended the preambles of the claims to state the intended use or purpose of the invention. Examiner has therefore withdrawn the objection to the claims.

Re: Claim Rejections - 35 USC § 102

14. Examiner has found that Applicants' amendments to the claims overcome the cited prior art. In addition, Examiner finds that Applicants' arguments (see pp. 16-18 of the amendment filed 11/4/05) are persuasive. Examiner has therefore withdrawn the rejections of the claims.

Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ayal I. Sharon whose telephone number is (571) 272-3714. The examiner can normally be reached on Monday through Thursday, and the first Friday of a biweek, 8:30 am – 5:30 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached at (571) 272-3753.

Any response to this office action should be faxed to (571) 273-8300, or mailed to:

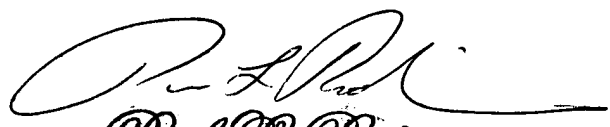
USPTO
P.O. Box 1450
Alexandria, VA 22313-1450

or hand carried to:

USPTO
Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Tech Center 2100 Receptionist, whose telephone number is (571) 272-2100.

Ayal I. Sharon
Art Unit 2123
March 10, 2006


Paul L. Rodriguez
Senior Primary Examiner
Art Unit 2125-2123